

Application No. 10/620,474

In Response to the Office Action Mailed on March 24, 2009

This Response Dated: July 24, 2009

## **AMENDMENTS**

### **CLAIMS**

Please amend Claims 11-12, 15, 19-38, 41-42, and 44-48. This Listing replaces any prior listings of claims concerning the present Application.

**LISTING OF THE (AMENDED) CLAIMS**

1-10. (Cancelled)

11. (Currently Amended) A method of assessing voice quality of a communication system using a voice analysis platform comprising:

transmitting reference speech samples into said communication system;

receiving said reference speech samples captured at one or more processing points within a gateway of said communication system; and

determining voice quality scores based on said captured reference speech samples using said voice analysis platform.

12. (Currently Amended) The method of Claim 11 further comprising displaying said voice quality scores graphically using said voice analysis platform.

13. (Original) The method of Claim 12 wherein said displaying occurs by way of a graphical user interface.

14. (Cancelled)

15. (Currently Amended) The method of Claim 11 further comprising determining and displaying statistical information related to said voice quality scores using said voice analysis platform.

16. (Original) The method of Claim 15 wherein said statistical information comprises an average voice quality score and a variance.

17. (Original) The method of Claim 11, wherein said gateway comprises a voice over IP gateway.

18. (Cancelled)

19. (Currently Amended) A system for monitoring degradation of voice quality in a communication system comprising:

a first voice analysis platform for transmitting a reference speech sample through said communication system; and

a second voice analysis platform for receiving said reference speech sample transmitted through said communication system, said communication system comprising ~~one or more~~ plurality of signal processing elements used to process said reference speech sample, wherein a network interface is used to communicatively couple the outputs of said plurality of signal processing elements to said first voice analysis platform or said second voice analysis platform, wherein a reference speech sample obtained at an output of a signal processing element of said plurality of signal processing elements is transmitted through said network interface to said first voice analysis platform or said second voice analysis platform, said reference speech sample obtained at said output used to compute a voice quality score at said first voice analysis platform or said second voice analysis platform, said first voice analysis platform or said second voice analysis platform receiving a selected output from a signal processing element of said one or more signal processing elements, said output used to compute a voice quality score.

20. (Currently Amended) The system of Claim 19 wherein said ~~one or more~~ signal processing elements ~~element~~ comprises a codec.

21. (Currently Amended) The system of Claim 19 wherein said ~~one or more~~ signal processing elements ~~element~~ comprises a voice activity detector.

22. (Currently Amended) The system of Claim 19 wherein said ~~one or more~~ signal processing elements ~~element~~ comprises an echo canceller.

23. (Currently Amended) The system of Claim 19 wherein said ~~one or more~~ signal processing ~~elements~~elements comprises a packetizer.

24. (Currently Amended) The system of Claim 19 wherein said ~~one or more~~ signal processing ~~elements~~elements comprises a jitter buffer.

25. (Currently Amended) The system of Claim 19 wherein said ~~one or more~~ signal processing ~~elements~~elements comprises a comfort noise generator.

26. (Currently Amended) The system of Claim 19 wherein said ~~one or more~~ ~~corresponding voice quality scores~~scores comprises PESQ.

27. (Currently Amended) The system of Claim 19 wherein said voice quality score ~~one or more corresponding voice quality scores~~ comprises PAMS.

28. (Currently Amended) The system of Claim 19 wherein said ~~one or more~~ ~~corresponding voice quality scores~~voice quality score comprises PSQM.

29. (Currently Amended) The system of Claim 19 wherein said first voice analysis platform comprises a software module, said software module comprising software that provides configuration data to a gateway, said gateway comprising said one or more signal processing elements, said configuration data used in ~~determining said selected~~selecting said output from ~~one or more~~said outputs for computing said voice quality score at said first voice analysis platform or said second voice analysis platform~~corresponding to said one or more signal processing elements.~~

30. (Currently Amended) A system for monitoring degradation of voice quality in a communication system comprising:

a voice analysis platform for transmitting and receiving ~~a~~ reference speech ~~sample~~ through said communication system, said communication system comprising ~~one or more~~a

plurality of signal processing elements used to process said reference speech sample, said voice analysis platform receiving a reference speech sample ~~a selected output from an output of a~~ signal processing element of said ~~one or more~~ plurality of signal processing elements, said reference speech sample transmitted to said voice analysis platform via a network interface, said network interface used for communicatively coupling said signal processing element to said voice analysis platform, said output-reference speech sample used to compute a voice quality score.

31. (Currently Amended) The system of Claim 30 wherein said ~~one or more~~ signal processing ~~elements~~ element comprises a codec.

32. (Currently Amended) The system of Claim 30 wherein said ~~one or more~~ signal processing ~~elements~~ element comprises a voice activity detector.

33. (Currently Amended) The system of Claim 30 wherein said ~~one or more~~ signal processing ~~elements~~ element comprises an echo canceller.

34. (Currently Amended) The system of Claim 30 wherein said ~~one or more~~ signal processing ~~elements~~ element comprises a packetizer.

35. (Currently Amended) The system of Claim 30 wherein said ~~one or more~~ ~~corresponding~~ voice quality ~~scores~~ score comprises PESQ.

36. (Currently Amended) The system of Claim 30 wherein said ~~one or more~~ ~~corresponding~~ voice quality ~~scores~~ score comprises PAMS.

37. (Currently Amended) The system of Claim 30 wherein said ~~one or more~~ ~~corresponding~~ voice quality ~~scores~~ score comprises PSQM.

38. (Currently Amended) The system of Claim 30 wherein said ~~one or more~~ signal processing ~~elements~~ element comprises a jitter buffer.

39. (Previously Presented) The system of Claim 30 wherein said one or more signal processing elements comprises a comfort noise generator.

40. (Previously Presented) The system of Claim 30 wherein said voice analysis platform comprises a software module, said software module comprising software that provides configuration data to a gateway, said gateway comprising said one or more signal processing elements, said configuration data used in determining said selected output from one or more outputs corresponding to said one or more signal processing elements.

41. (Currently Amended) A method of assessing voice quality at various points along a communication system comprising:

transmitting a reference speech ~~sample~~ from a first voice analysis platform to a second voice analysis platform via at least one gateway;

monitoring ~~one or more~~ an output ~~outputs of one or more~~ a plurality of signal processing elements of said ~~communication system~~ at least one gateway;

transmitting a reference speech sample from said output to said first voice analysis platform or said second voice analysis platform; and

using said ~~one or more~~ outputs reference speech sample to generate ~~one or more~~ corresponding voice quality scores a voice quality score by said first voice analysis platform or said second voice analysis platform.

42. (Currently Amended) The method of Claim 41 further comprising displaying said ~~one or more~~ voice quality scores score graphically.

43. (Previously Presented) The method of Claim 42 wherein said displaying occurs by way of a graphical user interface.

44. (Currently Amended) The method of Claim 41 further comprising determining and displaying statistical information related to said voice quality ~~seeres~~score.

45. (Currently Amended) The method of Claim 44 wherein said statistical information comprises an average voice quality seeres score and one or more variances.

46. (Currently Amended) The method of Claim 41 wherein said voice quality ~~seeres~~score isare generated using a PESQ algorithm.

47. (Currently Amended) The method of Claim 41 wherein said voice quality ~~seeres~~score isare generated using a PAMS algorithm.

48. (Currently Amended) The method of Claim 41 wherein said voice quality ~~seeres~~score isare generated using a PSQM algorithm.

49. (Previously Presented) The method of Claim 11 wherein said one or more processing points comprises a codec.

50. (Previously Presented) The method of Claim 11 wherein said one or more processing points comprises a voice activity detector.

51. (Previously Presented) The method of Claim 11 wherein said one or more processing points comprises an echo canceller.

52. (Previously Presented) The method of Claim 11 wherein said one or more processing points comprises a packetizer.

53. (Previously Presented) The method of Claim 11 wherein said one or more processing points comprises a jitter buffer.

54. (Previously Presented) The method of Claim 11 wherein said one or more processing points comprises a comfort noise generator.